

POVALYAYEV, M.I., kand. tekhn. nauk; VORONIN, A.M., inzh.

Rules for the arrangement of mastic roofs reinforced by glass materials.
Prom. stroi. 43 no.9:13-16 '65. (MIRA 18:9)

1. TSentral'nyy nauchno-issledovatel'skiy i proyektno-eksperimental'nyy
institut promyshlennykh zdaniy i sooruzheniy.

ACCESSION NR: AP5016399

UN/0120/02/000/033/0220/0222
621.374.32

AUTHOR: Batalin, S. S.; Voronin, A. M.

TITLE: Digit printing for dekatron scalars

SOURCE: Priory 1 tekhnika eksperimenta, no. 3, 1965, 220-22

TOPIC TAGS: digit printer, scalar

ABSTRACT: A system of delivering information from a dekatron scalar to a "Kheir-Metal" typewriter is briefly described. The total transcribing time depends on the number of decades and is about 4 sec for the Soviet-made PS-2C scalar. A block diagram and a principal circuit diagram are explained. The digit printing system can also operate from a number of scalars. Orig. art. has: 2 figures.

ASSOCIATION: Institut yadernoy fiziki AN KazSSR, Almaty (Institute of Nuclear Physics, AN KazSSR)

SUBMITTED: 24Mar64

INDEX: 00

SUB CODE: D2, D3

NO REF SOV: 000

OTHER: 000

Card 1/1

VORONIN, A.N., inzh. (Kiyev)

Use of a speed-voltage generator for performing division
operations in automatic control systems. Elektrichestvo no.11:
32-35 N '65. (MIRA 18:11)

11P(c)

WV/BC

ACCESSION NR. AP6002692

SI/0280/64/000/206/0154/0157

15

AUTHOR: Voronin, A. N. (Kiev)

TITLE: Using disturbance signals in high-speed automatic systems

SOURCE: AN SSSR. Investiya. Tekhnicheskaya kibernetika, no. 6, 1964, 154-157

TOPIC TAGS: automatic control, automatic control design, automatic control system, automatic control theory (1)

ABSTRACT: The effect of principal disturbances on the optimality of transient processes in high-speed automatic-control systems (ACS) is theoretically investigated. Compensation of such disturbances as a method for enhancing the ACS speed is considered. It is found that: (1) A high-speed ACS having no disturbance link in its structure cannot ensure the optimal transient process when disturbances occur; (2) If the ACS constraints depend on disturbances, the characteristics of the nonlinear converter involved should be made dependent on

Card 1/2

L 29545-65

ACCESSION NR: AP5002692

the same disturbances in order to ensure that the ACS operation obeys the optimal law within the entire range of the disturbances; (3) If the plant has a proportional characteristic with respect to the principal disturbances, the ACS should consist of two loops, one of them ensuring the invariance of the controlled coordinate to steady-state disturbances and the other taking care of error signals in a time-optimum (or near-optimum) way; no integrating unit is included in ACS, and no conditions for causing regulator cycling are assumed to be present. Orig. art. has: 2 figures and 3 formulas.

ASSOCIATION: none

SUBMITTED: 07Oct63

ENCLOS: 00

SUB CODE: IE

NO REF SOV: 004

OTHER: 002

Card 2/2

ACCESSION NR: AP4025740

8/0144/64/000/002/0217/0227

AUTHOR: Voronin, Al'bert Nikolayevich (Aspirant)

TITLE: Calculating the settings of a quick-acting speed-limited and torque-limited servo system

SOURCE: IVUZ. Elektromekhanika, no. 2, 1964, 217-227

TOPIC TAGS: automatic control, servo, quick acting automatic control, speed limited servo, torque limited servo

ABSTRACT: An electromechanical continuous power servo is theoretically investigated; it is proven that the characteristics of the nonlinear components improving the dynamic properties of such a servo should be selected with a proper allowance for some parameters of the servo. The motion of the servo in the phase plane is investigated. Formulas are developed for calculating the amplifier gain and the coefficient of a nonlinear feedback. The effect of the

Card 1/2

ACCESSION NR: AF4025740

initial error on the optimality of transient processes is studied. These conclusions are offered: (1) To ensure the transient process in a quick-acting servo system having a finite gain approaching its optimum as close as possible, the coefficient of a nonlinear feedback should be determined as a function (formula supplied) of the gain; (2) With specified finite system parameters, in working out the initial error, the closer the transient process is to its optimum, the higher is the initial error; a value of the initial error exists which causes the system to operate at its maximum dynamic torque. Orig. art. has: 5 figures and 45 formulas.

ASSOCIATION: none

SUBMITTED: 28 Nov 63

SUB CODE: DP, LE

DATE ACQ: 16 Apr 64

NO REF SOV: 002

ENCL: 00

OTHER: 001

Card 2/2

VORONIN, A. N. et al

"Radioisotope fueled thermoelectric generators."

report presented at the 3rd Intl Conf on Peaceful Uses of Atomic Energy, Geneva,
31 Aug-9 Sep 64.

VORONIN, A.N. [Voronin, A.M.] (Kiyev)

Effect of a load on the dynamic characteristics of a servo system
optimum in respect to response time. Avtomatyka 8 no.5:13-19 '63.
(MIRA 17:1)

VORONIN, A.N., inzh.

Conditions of static invariancy in regulating the voltage
of a generator. Izv. vys. ucheb. zav.; energ. 7 no.2:85-88
F '64. (MIRA 17:3)

1. Institut avtomatiki Gosplana UkrSSR. Predstavlena labora-
toriyey teorii informatsii i upravleniya.

KALMYKOV, M.R.; VORONIN, A.N.

Device for glazing ceramic pipes. Stek. i ker. 18 no.12:31-32
D '61. (MIRA 16:8)

1. Rachitskiy zavod keramicheskikh trub.
(Pipe, Clay)

VORONIN, A.N., inzh.

Nearly optimal voltage regulation of a generator. Izr. vys. ucheb.
zav.; energ. 7 no.5:14-19 My '64. (MIRA 17:7)

1. Institut avtomatiki Gosplana UkrSSR.

VORONIN, A.N., inzh.; DOLETSKIY, S.P., inzh.

E-158A excavator for finishing earthwork and planning. Strel
1 dor. mash. 8 no.12:1-2 D*63 (MIRA 1787)

N.

Thermoelectric Generator TUK-3. V. D. Buzik, A. V. Korovin & N. Roznitskaya. (Radio, Moscow, Feb. 1961, No. 2, pp. 24-26) Description of a paraffin-lamp-driven generator for use with battery-type receivers. The outputs are 2 V, 2 A for the vibrator h.t. unit and 2 V, 0.5 A for heaters. A 1-2 V, 0.3-0.4 tapping is also provided. Semiconductor-type thermoelements are mentioned as being more efficient than pure-metal thermocouples.

10-1-1978

U.S. SECRET *SECRET*
 VORONIN, Anatoliy Nikolayevich, inzh.; IOFFE, A.F., akademik, red.;
 SOMINSKIY, M.S., kand. fiz.-mat. nauk, red.; MASLAKOVITS, Yu.P.,
 doktor fiz.-mat.nauk, red.; SMOLENSKIY, G.A., doktor fiz.-mat.nauk,
 red.; SHALYT, S.S., doktor fiz.-mat.nauk, red.; RIGEL', A.R., kand.
 fiz.-mat.nauk; SUBASHIYEV, V.K., kand.fiz.-mat.nauk, red.; SHAGURIN,
 K.A., inzh.red.; AGHKINADZE, Sh.D., inzh.; FREGER, D.P., tekhn.red.

[Semiconductor thermoelectric generators] Poluprovodnikovye termo-
 elektrogeneratory. Leningrad, Leningr. dom nauchno-tekhn.propagandy,
 1957. 43 p. (Poluprovodniki, no.13) (MIRA 11:3)
 (Semiconductors) (Electric generators)

VORONIN, A.N.; SHER, E.M.; SHCHERBINA, A.G.

Precision semiconductor zero thermostat. Prib. i tekhn. eksp.
6 no.4:181-182 JI-Ag '61. (MIRA 14:9)

1. Institut poluprovodnikov AN SSSR.
(Thermostat)

ACCESSION NR: AT3007806

S/2959/63/000/000/0117/0122

AUTHOR: Voronin, A. N.; Grinberg, R. Z.

TITLE: Briquetting of thermocouple electrodes of Bi_2Te_3 — Sb_2Te_3 and Bi_2Te_3 — Bi_2Se_3 alloys, with subsequent heat treatment

SOURCE: Termoelektricheskiye svoystva poluprovodnikov; sbornik trudov I i II soveshchaniya po termoelektrichestvu. Moscow, 1963, 117-122

TOPIC TAGS: thermocouple, thermocouple electrode, thermocouple alloy, thermocouple electrode alloy, thermocouple heat treatment, Bi sub 2 Te sub 3 Sb sub 2 Te sub 3 alloy, Bi sub 2 Te sub 3 Bi sub 2 Se sub 3 alloy

ABSTRACT: A new powder technology has been developed for thermocouple manufacture by a method of cold pressing and subsequent heat treatment. The relationships between grain size, pressure, heat-treatment temperature and duration, and the resulting thermoelectric properties of the electrodes were established. The starting materials were: TsMTU-3098-52 Bi, TsMTU-42-11 Class I sublimated Te, SU-O Sb,

Card 1/3

ACCESSION NR: AT3007806

and Reactive-brand Se. For the positive alloy, 3% Te and 0.1% Pb were added, and for the negative, 0.5% Bi and 0.06% Cu. Grain size of the alloy powder ranged from 0.1 to 3 mm. The duration of heat treatment varied from 3 to 48 hours and the pressure, from 1 to 10 ton/cm². The maximum power coefficient for positive electrodes was obtained at 8-9 ton/cm², with subsequent tempering at 385C for 8 hr, and with a grain size of 0.25 mm or less. The maximum power coefficient generally corresponded to the maximum density of a specimen. The power coefficient increased with temperature up to 400C, after which the specimens deformed, and with the duration of tempering up to 350C; at 390C the prolongation of heat treatment had little effect. A grain-size decrease effects an increase in the thermal coefficient and a decrease in electroconductivity and lattice thermal conductivity. For negative electrodes, the optimal pressure remains at 8-9 ton/cm² (for specimens with grain size less than 0.25 mm sintered for 8 hr at 530C. With an increase in the tempering temperature of the negative electrode, the electroconductivity and power coefficient increase and the thermal coefficient decreases. The effectiveness of the alloy changes only slightly at

Card 2/3

ACCESSION NR: AT3007806

400—500C; at higher temperatures deformation sets in. Optimum stability of the $\text{Bi}_2\text{Te}_3\text{--Bi}_2\text{Se}_3$ alloy was obtained with tempering at 510—530C. The grain-size effect is similar for positive and negative electrodes. Thermocouples composed of electrodes with optimal characteristics had an effectiveness of 1.92×10^{-3} /degree or, for specimens having an almost monocrystalline structure, 2.06×10^{-3} /degree. The average mechanical strength of the cold-pressed specimens was 4.98 kg/cm^2 , and that of the hot-pressed specimens, 4.46 kg/cm^2 . Orig. art. has: 5 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 160ct63

ENCL: 00

SUB CODE: PH

NO REF SOV: 004

OTHER: 000

Card 3/3

VORONIN, A.N. (Kiyev)

Use of disturbance signals in high-speed automatic control systems.
Izv. AN SSSR. Tekh. kib. no.6:154-157 N-D '64.

(MIRA 18:3)

L 12805-65 EMT(d) Po-4/Pq-4/Pg-4/Pk-4/Pl-4 JIP(c)/ASD(a)-5/SG/AFIC(a)/
 ASD(a)/AFMDC/AFETR/AFIC(p)/RAEM(a)/EIS(ap) LC 3/0105/64/000/009/0041/0046
 ACCESSION NR: AP4045823

AUTHOR: Voronin A. N. (Kiev)

TITLE: Second-derivative signal used for optimizing transient processes in
 high-speed servosystems.

SOURCE: Elektrichestvo, no. 9, 1964, 41-46

TOPIC TAGS: automatic control, automatic control design, automatic control
 system, automatic control theory, servosystem, high speed servosystem

ABSTRACT: The use of a signal proportional to the error second derivative for
 optimizing transient processes under fluctuating-load conditions, without direct
 measurement of disturbing factors, is investigated. A high-speed power servo-
 system (see Enclosure 1), whose actuator has excavator-type mechanical
 characteristics, is analysed. Although the physical system is rate- and
 acceleration-constrained, the analysis takes only the second derivative into

Card 1/3

L 13805-65

ACCESSION NR: AF4045623

account. A random-fluctuating dry-friction load moment is considered. For optimization purposes, the number of high-derivative signals and their weights are determined from statistical characteristics of the load, which makes the problem determinate. In the widespread practical case, when the average rate of fluctuation of the load moment is so much lower than the speed of error-induced operation that this moment can be considered constant during the system deceleration time, the transient-process optimization can be realized by means of the acceleration signal only. Orig. art. has: 5 figures and 26 formulas.

ASSOCIATION: none

SUBMITTED: 25 May 64

ENCL: 01

SUB CODE: DP, LE

NO REF SOV: 006

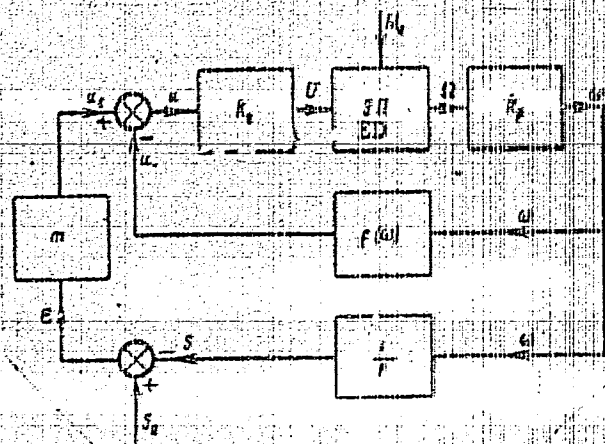
OTHER: 002

Card 2/3

L 13805-65

ACCESSION NR: AP4045623

ENCLOSURE: 01



s - present position of the driven axle
 s_0 - position of the reference axle
 e - error
 e_s - error signal
 u_f - feedback signal
 u - control signal
 U - motor armature voltage
 M_L - load moment
 ω - driven axle speed
 k - transfer factor of the measuring unit of the principal loop
 k_r - amplifier gain
 E - electric drive
 k_r - reduction ratio
 $f(\omega)$ - function generator of $e_s = k_r \omega$

A functional diagram of the high-speed power servosystem.

Card 3/3

VORONIN, Al'bert Nikolayevich, aspirant

Calculation of the setting of a high-speed servo system with
moment and speed limitations. Izv. vys. ucheb. zav.; elektromekh.
7 no.2:217-227 '64. (MIRA 17:4)

VORONIN, A.N. [Voronin, A.M.] (Kiyev); TSIPSYURA, R.D. [TSyptsura,
R.D.] (Kiyev)

Composite system for automatic frequency and active power
control using as a compounding signal a load determined by
a chart of maximally economical powers. Avtomatyka 9
no.5:83-85 '64. (MIRA 18:2)

VORONIN, A.P.; NIZHEGORODOV, V.M., dotsent; KALININ, I.I., assistant

Conditions of storage, transport and use of poisonous chemicals.
Zdrev. Bel. 9 no.7:55-56 JI*63 (MIRA 17:4)

1. Iz kafedry obshchey gigiyeny (zav. - dotsent V.M.Nizhegorodov) Grodnenskogo meditsinskogo instituta.

VORONIN, A.P.

Changes in the design of the spur rack bushing of the pressure
shaft band in E-1004 excavators. Rats. i izobr.predl. v stroi.
no.79:26-27 '54. (MIRA 8:4)
(Excavating machinery)

L 54522-65

ACCESSION NR: AP5017994

ASSOCIATION: Grodno'skiy gosudarstvennyy meditsinskiy institut (Grodno State Medical Institute); Leningradskiy nauchno-issledovatel'skiy institut gigieny truda i profzabolevaniy. Ministerstvo zdravookhraneniya RSFSR (Leningrad Scientific Research Institute for Industrial Hygiene and Preventive Medicine, Ministry of Health, RSFSR)

SUBMITTED: 00

ENCL: 00

5TH CONC: 14

NO REF SOV: 000

OTHER: 000

JMS

Card 2/2

VORONIN, A. P.

AID P 2467

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 14/18

Authors : Voronin, A. P., Graduate Research Student, Sokolova, L.A.,
Industrial Sanitary Inspector

Title : Some defects of standard designs of repair shops in
machine and tractor stations

Periodical : Gig. i san., 6, 55-58, Je 1955

Abstract : Describes the defects of repair shops built in the
Yaroslavl' Province in 1949-1953, and gives recom-
mendations for their reconstruction, as well as for the
present standard design No. 1662. Considers the standard
designs of machine and tractor stations and their repair
shops unsatisfactory from the point of view of hygiene.
Table.

Institution: None

Submitted : Dec. 13, 1954

Card
VORONIN, A. P.: Master Med Sci (diss) -- "Material on the toxicology of cyclohexanone". Leningrad, 1958. 12 pp (Min Health RSTBR, Leningrad Sanitary-Hygiene Med Inst), 200 copies (KL, No 4, 1959, 130)

ALEKSEYEVA, Rsvmira Valentinovna, kand. ekon. nauk; VORONIN, Andrey
Pavlovich, kand. ekon. nauk; ZAVERNYAYEVA, L.V., red.;
GERASIMOVA, Ia.S., tekhn. red.

[Accumulation and development of collective farm property]
Nakoplenie i razvitie kolkhoznoi sobstvennosti. Moskva,
Izd-vo ekon. lit-ry, 1963. 247 p. (MIRA 16:16)
(Collective farms--Finance)

S/120/61/000/004/032/034
E194/E355

AUTHORS: Voronin, A.N., Sher, E.M. and Shcherbina, A.G.

TITLE: A precision semiconductor zero-thermostat

PERIODICAL: Pribery i tekhnika eksperimenta, no. 4, 1961,
pp. 181 - 182

TEXT: Maintaining the cold junctions of thermocouples in a vacuum flask with melting ice is an inconvenient and rather inaccurate arrangement. A cold-junction thermostat has been constructed, based on semiconductor cooling thermo-elements, which accurately maintains a temperature of 0 °C. The cold junction of the thermocouple is in a sealed copper vessel, completely filled with water and also containing a pressure bellows inside which are electrical contacts that operate when the bellows are compressed. The base of the copper vessel is cooled by being in contact with the cold junctions of a battery of 8 semiconductor thermo-elements connected in series and passing a current of 16 A. The hot junction is cooled by tap water and the water unions also serve as electrical terminals. As the water in the copper

Card 1/2

A precision

S/120/61/000/004/032/034
E194/E355

vessel is cooled it freezes round the walls, expanding so that the pressure-sensitive bellows is compressed to operate a relay that disconnects supply from the thermal battery. As the ice melts the pressure is relieved and supply to the thermo-battery is restored. Thus, the cold junction is always in water that is in equilibrium with ice.

Foam plastic is used for thermal insulation of the equipment. The thermostat maintains a temperature of 0°C to within $\pm 0.001^{\circ}\text{C}$. The thermostat is 100 mm in diameter, 120 mm high and weighs 1.1 kg. It is supplied by a rectifier unit using two germanium diodes type БГ-10 (VG-10) and can operate with cooling-water temperature up to 30°C and room temperatures up to 40°C . By increasing the size, water cooling could be replaced by natural cooling. There are 2 figures.

ASSOCIATION: Institut poluprovodnikov AN SSSR (Institute of Semiconductors of the AS USSR)

SUBMITTED: December 15, 1960

Card 2/2

NESTEROV, Mikhail Aleksandrovich; SMIRNOV, Andrey Aleksandrovich;
VORONIN, A.S., red.

[Interbranch standardization of founding equipment and
tools] Mezhotraslevaia normalizatsiia liteinoi obrastki i
instrumenta. Moskva, Izd-vo Standartov, 1965. 131 p.
(MIRA 18:10)

AFONIN, K.B.; BURTSEV, K.I.; BYSTROV, S.N.; VINETS, G.B.; VODNIV, G.G.; VORONIN, A.S.; GEVLICH, A.S.; GRYAZNOV, N.S.; GUDIM, A.F.; GUSTATINSKIY, N.A.; DVORIN, S.B.; DIDENKO, V.Ye.; DMITRIYEV, M.M.; DORDE, M.M.; DOROGOBID, G.M.; ZHDANOV, G.I.; ZAGORUL'KO, A.I.; ZELIKOVSKIY, A.G.; IVASHCHENKO, Ya.N.; KAPTAN, S.I.; KVASHA, A.S.; KIRBYEV, A.D.; KLISHEVSKIY, G.S.; KOZYREV, V.P.; KOLOBOV, V.N.; LGALOV, K.I.; LEVITS, V.A.; LERNER, B.Z.; LOBODA, N.S.; LUBINKIN, I.A.; MANDRYKIN, I.I.; MUSTAFIN, F.A.; NEMIROVSKIY, N.K.; NEFEDOV, V.A.; OBUKHOVSKIY, Ya.M.; PERESIN, M.A.; PETROV, I.D.; PODOROZHANSKIY, M.O.; POPOV, A.P.; RAK, A.I.; RIVYAKIN, A.A.; ROZHKOV, A.P.; ROZENGAUZ, D.A.; SAZONOV, S.A.; SIGALOV, M.B.; STOMAKHIN, Ya.B.; TARASOV, S.A.; FILIPPOV, B.S.; FRILMA, N.K.; FRISHBERG, V.D.; KHAR'KOVSKIY, K.V.; KHOLAPTSOV, V.P.; TSARK, M.N.; TSOGLIN, M.E.; CHERNIY, I.I. CHERTOK, V.T.; SHKLOV, A.K.

Samuil Borisovich Bamme. Keks i khim. no. 6:64 '56.
(Bamme, Samuil Borisovich, 1910-1956)

(MIRA 9:10)

BORISOV, Nikolay Ivanovich; SMOLIN, V.N., nauchn. red.; VORONIN,
A.S., red.

[Standardization of the parameters of motor vehicles]
Standartizatsiia parametrov avtomobilei. Moskva, Izd-vo
Standartov, 1965. 179 p. (MIRA 18:8)

VORONIN, A. V.

AUTHOR: Sergeyev, A. S., Docent 105-58-4-31/37

TITLE: Dissertations (Dissertatsii)

PERIODICAL: Elektrichestvo, 1958, Nr 4, pp. 90 - 91 (USSR)

ABSTRACT: For the Degree of a Candidate of Technical Sciences, 1946-1953.
At the All Union Scientific Research Institute for Railroad Traffic Engineers (Vsesoyuznyy nauchno-issledovatel'skiy institut inzhenerov zheleznodorozhnogo transporta).
M. D. Treyvas, on March 22, 1946: " Selection of Filtering Devices for Train Undercarriages With Non-Controlled and Controlled Mercury-Arc Rectifiers". Official opponents were: Doctor of Technical Sciences Professor G. V. Dobrovol'skiy and Engineer S. M. Serdinov.
A. V. Voronin, on June 21, 1946: " Current Distribution Between the Longitudinal Lines of the Contact Network and the Calculation of the Heat Development of the Network-Elements". Official opponents were: Doctor of Technical Sciences K. M. Markvardt and Doctor of Technical Sciences Professor D. M. Minov.

Card 1/4

Dissertations

105-58-4-31/37

I. I. Vlasov, on February 21, 1947: "Some Problems on the Wear of Contact Lines for Electrified Railroads". Official opponents were: Doctor of Technical Sciences Professor K. G. Markvardt and Engineer S. M. Serdinov.

I. A. Korchagin, on June 27, 1947: "Start of the Production and the Investigation of Selenium Rectifiers for the Supply Devices of the Signalization-Centralization Blocking". Official opponents were: Doctor of Technical Sciences Professor M. I. Vakhnin and Candidate of Technical Sciences S. B. Yuditskiy.

A. V. Posse, on October 17, 1947: "Monophase D.C. Ignitron Transformer for Main-Line Electric Locomotives". Official opponents were: Doctor of Technical Sciences Professor G. I. Babat and Candidate of Technical Sciences M. A. Chernyshev.

R. I. Miroshnichenko, on June 30, 1950: "Development of the Method for the Calculation of Smoothing Devices for Rectifier Substations". Official opponents were: Doctor of Technical Sciences Professor M. I. Mikhaylov and Engineer S. M. Serdinov.

I. I. Rykov, on March 2, 1951: "Atmospheric Excess Voltages in Traction Equipment of D.C.-Railroads". Official opponents

Card 2/4

Dissertations

105-50-4-31/37

were: Doctor of Technical Sciences Professor V. V. Burgsdorf and Engineer V. I. Tromifov.
B. Ye. Geronimus, on May 25, 1951: "Selection and Maintenance of External Optimum Characteristics for Mercury-Arc Rectifier Train Substations of Mainline Railroads". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Engineer L. M. Pertsovskiy.
V. D. Radchenko, on December 14, 1951: "Protection of D.C. Electro-Locomotives Against Atmospheric Excess Voltages". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Candidate of Technical Sciences D. V. Razevig.
Ye. P. Ivanov, on December 28, 1951: "Determination of Excess Recuperation Energy in Electrified Railroads". Official opponents were: Doctor of Technical Sciences M. A. Chernyshev and Candidate of Technical Sciences M. Ye. Krest'yanov.
Yu. L. Kartvelishvili, on January 18, 1952: "Investigation of the Operation of Train Electromotors in Diesel Locomotives in an Operation With Weakened Field". Official opponents were: Doctor of Technical Sciences Professor Ye. V. Nitusov and Doctor of Technical Sciences A. S. Dimitradze.

Card 3/4

Dissertations

105-58-4-31/37

S. M. Domanitskiy, on March 13, 1953: "Excitation Automation in Train Generators in Diesel Locomotives When Using Magnetic Amplifiers". Official opponents were: Doctor of Technical Sciences Professor Ye. V. Nitusov and Candidate of Technical Sciences Docent A. D. Stepanov.

V. S. Khvostov, on December 25, 1953: "Magnetic Calculations and Construction of the Collector Potential Curves in D.C. Traction Motors". Official opponents were: Doctor of Technical Sciences N. V. Gorokhov and Candidate of Technical Sciences Docent P. N. Shlyakhto.

AVAILABLE: Library of Congress

1. Electrical engineering-Reports

Card 4/4

VORONIN, A.

Experiences with electric traction using alternating current of industrial frequency.
Tr. from the Russian.

p. 277 (Železniční Technika. Vol. 5, no. 11, Nov. 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

VORONIN. A.V.

VORONIN, A.V., kandidat tekhnicheskikh nauk

Investigation of wire heating in contact systems and their thermal
calculation. Tekh.zhel.dor. 6 no.7:11-14 J1'47. (MLRA 8:11)
(Electric railroads--Wires and wiring)

VORONIN, A.V., kandidat tekhnicheskikh nauk

Development of electric traction during the 30 years of Soviet
power. Tekh.zhel.dor.6 no.11:15-19 N'47. (MIRA 8:12)
(Electric railroads)

VORONIN, A. V.

USSR (600)

Electric Railroads - Wires and Wiring

Contact network with flexible hanger suspension, and relevant calculations.
Trudy TSNII MPS No. 7, 1947.

9. Monthly List of Russian Accessions, Library of Congress, October 195⁸, Uncl.
2

VORONIN, A., kandidat tekhnicheskikh nauk; SOKOLOV, N.; RYAZANTSEV, B.

Against conservatism in introducing new signal, central control, block system and new communication techniques. Zhel.dor.transp. no.10:47-55 0'47. (MLRA 8:12)

1. Direktor-polkovnik svyazi (for Voronin) 2. Glavnyy inzhener Tsentral'nogo Upravleniya mashinostroitel'nykh zavodov Ministerstva putey soobshcheniya, general-direktor tyagi 3-go ranga (for Sokolov)
3. Zam.nachal'nika Glavnogo upravleniya signalizatsii i svyazay Ministerstva putey soobshcheniya, direktor-polkovnik svyazi (for Ryazantsev)

(Railroads--Signaling)

VORONIN, A. V. and BISLOUKH, L. A.

"An Investigation of the Heat Emitted From the Surface of Contact System Conductors," The Works of the Scientific-Research Institute of Railroad Transportation (Trudy vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta) No 42, Transzheldorizdat, 132 pp, 1951.

W-22517, 29 Apr 52

VISLOUKH, L.A., inzh.; VORONIN, A.V., kand. tekhn. nauk.

Investigating heat emission from surfaces of wires used in contact
network installations. Trudy TSNII MPS no. 42:80.96 '51.
(Electric railroads--Wires and wiring) (MIRA 11:6)
(Heat--Radiation and absorption)

VORONIN, A.V., kandidat tekhnicheskikh nauk

Investigation of the performance of electric train equipment.
Trudy TSNII MPS no. 88:3-130 '53.
(Electric railroads--Equipment and supplies)

(MLA 7:7)

VORONIN, Aleksey Vladimirovich; KALININ, V.K., redaktor; VERINA, G.P.,
tekhnicheskiiy redaktor

[Power supply for electric railroads] Energosnabzhenie electriceskikh
zheleznnykh dorog. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 350 p.
[Microfilm] (MLRA 8:3)
(Electric railroads--Substations)

VORONIN A.V.

KHACHATRYAN, A.S.; ABADZHEV, Yu.G.; ZOLOTAREV, T.L.; KONDAKHONIAN, V.S.;
ATABEKOV, G.I.; GABASHVILI, N.V.; SISOYAN, G.A.; MAKHARADZE, G.K.;
VORONIN, A.V.; GORTINSKIY, S.M.; KARSAULIDZE, A.N.

Professor A.IA Ter-Khachaturov. A.S.Khachatrian and others.
Elektrichestvo no.8:90 Ag '54. (MLHA 7:8)
(Ter-Khachaturov, Artemii Iakovlevich, 1884-)

VORONIN

A.V.

VLASOV, I.I.; KALININ, V.K., inzhener, redaktor; IVANOV, I.A., direktor;
VORONIN, A.V., rukovoditel' otdeleniya elektrifikatsii; YUDSON, D.M.,
tekhnicheskii redaktor.

Technique for the mechanical design of contact systems. Trudy TSNII
MPS no.91:3-82 '54. (MLRA 7:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut shestnodorozhno-
go transporta MPS (for Ivanov)
(Electric railroads)

VORONIN, A.V., kandidat tekhnicheskikh nauk.

New technology in railroad electrification. Transp.strel. 6 no.7:
4-8 JI '56. (Railroads--Electrification) (MLBA 9:10)

VORONIN, A.V., kand.tekhn.nauk, red.; SIDOROV, N.I., inzh., red.; SHIRYAYEV,
A.P., inzh., red.; VERINA, G.P., tekhn.red.

[Electric traction for foreign railroads on single-phase current;
a collection of papers. Translations] Elektricheskaya tiaga zarubezh-
nykh zheleznnykh dorog na odnofaznom toke; sbornik materialov. Moskva,
Gos.transp.zhel-dor. izd-vo, 1957. 254 p. (MIRA 11:7)
(Electric railroads)

VORONIN, A.V., kandidat tekhnicheskikh nauk.

Prospects for single-phase traction systems in the U.S.S.R. Elektri-
chestvo no.2:1-4 F '57. (MLRA 10:3)

1. Institut kompleksnykh transportnykh problem AN SSSR.
(Railroads--Electrification)

Voronin, A. V.

AUTHORS:

Khachaturov, T. S., Voronin, A.V., Denisov P. K. 30-11-10/23

TITLE:

Current Problem in Transportation Development
(Aktual'naya problema razvitiya transporta) On the Electrification of Railroads by Means of Monophase Current (Ob elektrifikatsii zheleznykh dorog na odnofaznom toke promyshlennoy chastoty).

PERIODICAL:

Vestnik AN SSSR, 1957, Vol. 27, Nr 11, pp. 89 - 94 (USSR)

ABSTRACT:

The author deals with the problem of profitableness. In connection with an essentially simplified supply of energy it may be reckoned with a reduction of the costs by 30 - 40%. By the use of alternating current (50 gts) the electric corrosion is also many times reduced; the safety devices necessary in the case of direct-current may also be dropped (see table 1). Besides the own weight of the electrical traction engines (Elok) in connection with the monophase direct current hitherto used can be essentially diminished. Electrical traction engines with monophase direct current (with ion-transformer) permit the use of recuperative braking when the motors work as generators (on lines with a fall) and give off the energy to the electric-supply line. The author among others refers to the investigations (electric traction engines with ion-transformer) carried out in the Rhineland.

Card 1/2

The Development of Transport a Problem of Topical Interest 30-11-10/23
On the Electrification of Railroads by Means of Monophase Current.

Numberous other problems should also be investigated in prallel with these, the author said, among them the exact technical-economical comparison of the alternating current as traction under the conditions prevailing in the USSR (see table 2). In the directions of the 20th congress of the CPSU a certain aim was set to these intentions. The production in series of main electric traction engines for monophase current began already in 1956. In Leningrad a new institute for electromechnics was established under the direction of M. P. Kostenko, Member of the railroads within the frame work of transport became of principal importance. Besides the change-over to alternating current should at once be carried out, in order to avoid later additional costs. There are 2 tables.

AVAILABLE: Library of Congress

Card 2/2

VORONIN, A.V.

DEBISOV, Pavel Konstantinovich; VORONIN, A.V., otvetstvennyy red.; KLYAUS, Ye.M., red., izd-va; RYLINA, Yu.V., tekhn.red.

[Use of alternating current of industrial frequency for electrification of railroads in the U.S.S.R.] Primenenie peremennogo toka promyshlen-
noi chastoty dlia elektrifikatsii zheleznnykh dorog SSSR. Moskva,
Izd-vo Akad.nauk SSSR, 1958. 76 p. (MIRA 11:6)

(Railroads--Electrification)
(Electric currents, Alternating)

VORONIN, Aleksey Vladimirovich; SIDOROV, N.I., inzh., red.; KHITEOV, P.A.,
~~tekhn. red.~~

[Power supply for electric railroads] Energosnabzhenie elektricheskikh zheleznnykh dorog. Izd.2., dop 1 ispr. Moskva, Gos. transp. zhel-dor. izd-vo, 1958. 408 p. (MIRA 11:10)
(Electric railroads)

VORONIN, A.V.

Electric power supply for electrified railroads. Elek 1 tepl tiaga
2 no.10:31-35 0 '58. (MIRA 11:11)

1. Zaveduyushchiy laboratoriyey Istituta kompleksnykh transportnykh
problem AN SSSR.
(Electric power distribution) (Electric railroads)

VORONIN, A.V.; TOPCHISHVILI, I.A.

Book about a prospective new system of electric traction ("Using industrial-frequency single-phase current for railroad electrification" by A.S.Avattkov. Reviewed by A.V.Voronin, I.A.Topchishvili). Elek. i tepl.tiaga 2 no.12:3 of cover D '58. (MIRA 12:1)

1. Zaveduyushchiy laboratoriyey instituta kompleksnykh transportnykh problem AN SSSR (for Voronin). 2. Glavnyy inzh. sluzhby elektrifikatsii i energeticheskogo khozyaystva Zakavkazskoy dorogi (for Topchishvili).
(Railroads--Electrification) (Avattkov, A.S.)

VORONIN, A.Y.

25(1)

MAKING OF BOOK REPRODUCTION

000/1009

Vsesoyuznyy mashino-ispolovatel'skiy Institut po normalizatsii v mashinostroyenii
Korpus v tekhnologii mashinostroyeniya (New Trends in Machinery Manufacture) Moscow,
Mashizis, 1959. 222 p. (Series: 101. Trudy, vyp. 1) Kuznetz ally inserted.
5,500 copies printed.

Additional sponsoring agencies: Vses. Akad. Nauch. Komitet standartov i
imperial'nykh priborov.

Ed. (Title page): O.B. Kozlov, Doctor of Technical Sciences, Professor; Ed. for
Mashizis: L.O. Prokhor'yev; Tech. Ed.: A.P. Gerasimov; Ed. for
Literature on Machine Building and Instrument Construction: A.Y. Voronin,
Engineer.

PURPOSE: This collection of articles is intended for the technical personnel of
machine-building plants, design and construction bureaus, and scientific research
organizations devoted to machine building. It may also be useful to the engineers
and students in the machine-building colleges and technical schools.

CONTENTS: This is the first number of the Transactions of Vsesoyuznyy (formerly
VNIIMASH) on the theoretical and experimental investigations of Machine Building
in 1956-57. Subjects covered include: investigations of new constructions
and advanced methods in machine building; machine parts for general machine
building; hydraulic machinery; improvements in preparatory techniques for
parts in this issue devoted to the theory of the progressive technique of making blanks
making steel and iron castings; the progressive technique of making blanks
for spinning with machines; and and and pumps and other machinery. Problems
for spinning with machines; and and and pumps and other machinery. Problems
and the theory of deformation of rings with large curvature are discussed.
In generalizations are mentioned. References accompany each article.

Leyner, B.P., Engineer, and V.D. Sazonov, Engineer.
The 195-1 Steel Boring Machine for Boring Shell Cases 17

Bayanov, A.I., Candidate of Technical Sciences, and
P.M. Sidorov, Engineer. Progressive Techniques in the
Production of Blanks for Spinning Rings 27

Sidorov, A.I., Candidate of Technical Sciences.
Technique of Cutting Threads for Screw Pumps 31

Dudakov, P.P., Candidate of Technical Sciences.
Dimensional Analysis of Riffled Cylinders for Cotton Spinning
Machines 35

Chernov, N.Ye., Engineer. Experiment in Using Fibrous Mills
From Standard Parts 115

Kozlov, O.B., and V.I. Lashkov, Engineers. Automatic Machines
For Inspection of Machined Precision 125

Fedorov, A.N., Candidate of Technical Sciences. Processing
Heat-Resistant Alloys Used in Steam and Hot Pumps 137

Alex. V.V., Candidate of Technical Sciences, and A.Y. Voronin,
Engineer. On Problem of Determination of Stated in the
147

VORONIN, A.V.; DEMISOV, P.K.

Effectiveness of the use of alternating current of commercial
frequency for traction purposes. Vop.elek.zhel.dor. no.1:5-30
'59. (MIRA 12:8)

(Electric railroads)

VORONIN, A.V.

Economic calculations in the design of an electric traction
contact network and special characteristics for making them
for a.c. and d.c. traction. Vop.elek.zhel.dor. no.1:75-88
'59. (MIRA 12:8)

(Electric railroads)

L 22163-66 EWT(d)/EWP(h)/EWP(1)

ACC NR: AP6013603

SOURCE CODE: UR/0105/65/010/010/0001/0007

AUTHOR: Voronin, A. V. (Candidate of technical sciences; Moscow)

ORG: none

TITLE: Technical and economic effectiveness of electrification of railroad transport and prospects for its development

SOURCE: Elektrichestvo, no. 10, 1965, 1-7

TOPIC TAGS: railway transportation, economics, electric power production

ABSTRACT: Electrification of railroad transport is considered by the Soviets to be a component part of electrification of the country. In the past few years, a transition has been made to use of ac at commercial frequency and 25 kv; the new ac system has been introduced on 6,200 km of railroad. Soon, electric and diesel engines will completely replace steam. The article states that calculations have shown it to be technically possible and economically justifiable to increase freight train speeds by 30% with the transition from diesel to electric power. This will result in a reduction in capital investments in rolling stock and a consequent savings. Calculations of the economic effectiveness presented, using the optimal variants of all tested types of transport power, show that: in the conditions of replacement of diesel power with electric, electrification is very effective and should

Card 1/2

UDC: 621.311:003.1

L 22463-66

ACC NR: AP6013603

be expanded; the correct calculation of economic effectiveness of electrification of the railroads requires that yearly changes in capital investments and usage costs be considered, especially the costs connected with construction of dual-track lines. Orig. art. has: 4 figures, 6 formulas, and 5 tables. [JPRS]

SUB CODE: 13, 05, 09 / SUBM DATE: 16Jun65 / ORIG REF: 003

Card 2/2 BK

VEKSER, N.A.; VERESHCHAGA, Ye.A.; KOTENKO, A.I.; Prinimal uchastnye:
VORONIN, A.V.

Effect of additional alloying and heat treatment on the
physicomechanical properties of wheel steel. Sbor.trud.
UNIIM no.11:334-343 '65.

(MIRA 18:11)

VORONIN, A.V., kand. tekhn. nauk, otv. red.; ZAKHAROVA, T.A., red.

[Technical and economic problems of developing transportation; transactions of the conference of young specialists]
Tekhniko-ekonomicheskie voprosy razvitiia transporta;
trudy konferentsii molodykh spetsialistov. Moskva, In-t
kompleksnykh transportnykh problem. No.6. 1964. 195 p.
(MIRA 18:4)

VORONIN, Aleksey Vladimirovich; KUCHKE, E.A., inzh., red.

[Electric power supply of electric railroads] Elektro-
snabzhenie elektrifitsirovannykh zheleznnykh dorog. Izd. 3.,
dop. i perer. Moskva, Transport, 1965. 306 p.
(MIRA 1884)

VORONIN, A.V., kand. tekhn. nauk

Determining the efficiency of electric traction taking over-
all electrification into account. Zhel. dor. transp. 45 no.6:
29-33 Je '63. (MIRA 16:7)

(Electric locomotives)

CHEBOTAREV, Yevgeniy Viktorovich; BELYAKOV, V.A., kand. tekhn. nauk, retsenzent; VORONIN, A.V., kand. tekhn. nauk, retsenzent; RYVKIN, Yu. Ie., kand. tekhn. nauk, dots., red.; FRIDKIN, L.M., tekhn. red.

[Principles of electric traction] Osnovy elektricheskoi tiagi. Moskva, Gosenergoizdat. Pt.2. [Theory of operation, methods for design, and choice of the parameters of the principal elements of electric-power supply systems of electric railroads] Teoriia raboty, metody rascheta i vybor parametrov osnovnykh elementov sistemy elektroobzheniia elektricheskikh dorog. 1963. 183 p. (MIRA 16:9)
(Electric railroads)

VORONIN, A.V., kand.tekhn.nauk (Moskva)

Methodology for determining the economic efficiency of hydroelectric
power stations. Elektrichestvo no.12:80-82 D '62. (MIRA 15:12)
(Hydroelectric power stations)

VORONIN, A.V., kand.tekhn.nauk (Moskva)

Consideration of equipment life in economic and efficiency
calculations in power engineering. Elektrichestvo no.3:84-85
Mr '62. (MIRA 15:2)

(Power engineering--Accounting)

VORONIN, A.V.; VYSOTSKIY, A.I.; RUMYANTSEV, I.I.

Choice of transformer circuits for a.c. traction substations. Elek.
zhel.dor. no.3:7-88 '61. (MIRA 14:7)
(Electric transformers) (Electric railroads--Current supply)

VORONIN, A.V., kand.tekhn.nauk (Moskva)

Certain problems concerning the methodology of engineering efficiency
calculations in power engineering. Elektrichestvo no.9:63-66
S '61. (MIRA 14:9)

(Power engineering)

VORONIN, A.V.; ZHAVORONKOV, I.Ya.

Selection of the best voltage for a.c. traction systems.
Elektrichestvo no.4:1-5 Ap '61. (MIRA 14:8)

1. Gosudarstvennyy nauchno-tekhnicheskii komitet Soveta
Ministrov SSSR.
(Electric railroads--Current supply)

VORONIN, A.V.; LEVINA, V.I.; KHARITONOVA, N.V.

Problem of selecting the parameters of electric power supply
systems for electric traction. Elek. zhel der. no. 2:6-27
'60. (MIRA 14:2)

(Electric railroads--Current supply)

VERONIN, A.V.

VERONIN, A.V.

Concerning the way for determining the average values of computations and magnitudes by electrical calculation of traction networks. Dis. (incl. ser. no. 2:233-269 160. (incl. 14:1)
(electric railroads---Current supply)

VORONIN, A. V., Cand Tech Sci -- (diss) "Research into the arrangement and securing of half-finished parts of the type of running bodies with unprocessed surfaces." Moscow, 1960. 16 pp with chart; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Automechanics Inst); number of copies not given; price not given; (KL, 22-60, 136)

ABEL', V.V., kand.tekhn.nauk; VORONIN, A.V., inzh.

Deformation of rings with a great curvature. Trudy VNIINMASH
no.1:197-211 '59. (MIRA 13:5)
(Deformations (Mechanics))

ACCESSION NR: AP4011534

S/0170/64/000/001/0028/0036

AUTHOR: Tsirlin, A. M.; Sakhiyev, A. S.; Voronin, B. D.; Khodov, G. Ya.

TITLE: Study of heat transfer between the wall of a packed tube and a gas at elevated temperatures

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 1, 1964, 28-36

TOPIC TAGS: electric gas heater, gas heater, heat transfer, packed tube, convective heat transfer, radiant heat transfer

ABSTRACT: A new type of electric gas heater (see enclosure) is used to investigate the heat transfer coefficient between the wall of a packed tube and hydrogen or nitrogen under temperatures conditions not previously studied, when there is appreciable radiant heat transfer. The tubes tested were 70- and 250-mm in diameter filled with molybdenum-tin spirals 0.1-mm thick, 4-mm in diameter, and 6-mm long. The details of the gas-heater are given. The gas test temperature ranged from 270 to 750 C, that of the pipe from 700 to 1100 C, and the Reynolds numbers ranged from 11.3 to 323. Curves are plotted for the experimental data and are generalized in two formulas in terms of Nusselt numbers. Results are compared with those obtained at low temperatures and are reduced to general equations which hold for a wide range

Cord 1/32

ACCESSION NR: AP4011534

of temperatures and a variety of geometrical pipe shapes. It is shown that packing increases heat transfer at high temperatures by factors of 20 to 150. The packing serves only to spoil the gas flow and thereby intensify convective heat transfer. Orig. art. has 4 figures and 13 formulas.

ASSOCIATION: none

SUBMITTED: 20Mar63

DATE ACQ: 14Feb64

ENCL: 01

SUB CODE: IE, SD, AI

NO REF SOV: 010

OTHER: 001

Card 2/32

TSIRLIN, A.M.; VORONIN, B.D.; KHODOV, G.Ya.

Hydraulic resistance in a high-temperature gas flow in tubes with
irregularly shaped packing. Inzh.-fiz. zhur. 7 no.8:103-107 Ag '64.
(MIRA 17:10)

TSIRLIN, A.M.; SAKHIYEV, A.S.; VORONIN, B.D.; KHODOV, G.Ya.

Heat transfer between the wall of a packed tube and a gas at elevated temperatures. Inzh.-fiz. zhur. 7 no.1:28-36 Ja '64. (MIRA 17:2)

S/193/62/000/010/003/007
AC04/A101

AUTHORS: Tsirlin, A. M., Voronin, B. D., Khodov, G. Ya.

TITLE: Shaft-type resistance furnace for hydrogen heating

PERIODICAL: Byulleten' tekhniko-ekonomicheskoy informatsii, no. 10, 1962,
28 - 30

TEXT: The new furnace for heating hydrogen up to $1,473 - 2,073^{\circ}\text{K}$ has been developed by an organization of the Gosudarstvennyy komitet po khimii pri Sovete Ministrov SSSR (State Committee of Chemistry at the Council of Ministers USSR). The tubular graphite heater of the furnace consists of a screen and electrode connected in series to the electric network through a graphite connector. The applied technology of covering the graphite by a solid layer of silicon carbide was developed by the Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Sintered Carbides) VNIITS. The authors give a detailed description of the furnace design and operation and point out that the heating element is completely relieved of the gas pressure. During operation the gas temperature at the furnace inlet and outlet, and the

Card 1/2

Shaft-type resistance furnace for hydrogen heating

S/193/62/000/C10/003/007
A004/A101

temperature of the heating element are measured by means of TsNIIChernmet-1 tungsten-molybdenum thermocouples. The following technical data are given: voltage 10 + 40 v; power - up to 475 kw; hydrogen consumption - up to 900 nm³/hour; working pressure - up to 6 atm; electrode service life - up to 800 hours; efficiency - up to 78%; working zone dimensions: diameter - 255 mm, length - 3,285 mm; heating element temperature - up to 2,473°K; temperature of the working gas during long-time operation 1,673 + 1,873°K. The new furnace differs from the present designs in that a combined graphite-molybdenum heater is used which ensures high temperatures, a large heat-exchange area and a satisfactory durability in respect to the gas being heated. There is 1 figure.

Card 2/2

L 23018-66

ACC NR: AP6010030

SOURCE CODE: UR/0170/66/010/003/0287/0293

AUTHOR: Voronin, B. D.; Tsirlin, A. M.; Smelyanskiy, M. Ya.

73
B

ORG: none

TITLE: Calculation of gas-dynamic factors in designing electric arc heaters with a vortex gas-stabilization arc

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 10, no. 3, 1966, 287-293

TOPIC TAGS: gas dynamics, electric arc, gas flow, electric property, heat radiation, vortex flow, thermal stability

ABSTRACT: Experiments have been carried out on stabilization of an arc by a vortex gas flow in an electric hydrogen heater. Boundaries of stable operation of the apparatus were found. Investigations of gas dynamics reveal an explicit similarity between the dependence of the limiting current and the tangential velocity in the electrode channel on the gas flow rate. The quantitative relation was found experimentally between the controlling parameters of the heater to express the gas-dynamic conditions of the arc stabilization at the boundary of the steady operation region. Many equations are presented for the calculation of electrical parameters and characteristic dimensions (the anode diameter) which provide a good stabilization of

Card 1/2

UDC: 533.6

L 23018-66

ACC NR: AP6010030

the arc and the required heat generation for a particular type of electrical heater. Orig. art. has: 4 figures, 8 formulas, and 1 table.
[Based on author's abstract] [HT]

SUB CODE: 20/

SURM DATE: 01Jun65/
OTH REF: 001/

ORIG REF: 005/

Card 2/2 *sla*

ACC NR: AP7004634

SOURCE CODE: UR/0288/66/000/003/0057/0065

AUTHOR: Voronin, B. D.; Tsirlin, A. M.; Smelyanskiy, M. Ya.

ORG: none

TITLE: Method for determining the operating parameters and the basic geometrical dimensions of vortex-stabilized electric-arc generators

SOURCE: AN SSSR. Sibirskoye otdeleniye. Izvestiya. Seriya tekhnicheskikh nauk, no. 3, 1966, 57-65

TOPIC TAGS: plasma generator, plasma heating, plasma arc, *electric arc, plasma jet, arc discharge*

ABSTRACT: A method is developed for calculating the basic working parameters of vortex-stabilized electric-arc plasma generators used as plasma jet sources, as high-temperature gas heaters, and as chemical reactors. In particular, expressions are derived for determining the volt-ampere characteristic and the characteristic geometrical diameter of the anode of such generators. In addition, the effects of current, gas discharge, and geometrical dimensions on the conditions of arc stabilization are considered. It is shown that the length of the anode, which is determined by the length of the arc discharge in its channel, has an appreciable effect on thermal characteristics of the generators. Other geometrical parameters, such as the diameter and length of both the vortex chamber and cathode, the number and cross-sectional area of inlet nozzles, and the spacing between the electrodes, do not

Card 1/2

UDC: 621.373.3

ACC NR: AP7004634

necessarily affect the basic characteristics of the generators and arc stabilization conditions. The derived expressions were used in designing a 1000-kw electric arc hydrogen heater. Orig. art. has: 6 figures and 14 formulas.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 009/ OTH REF: 001

Card 2/2

VORONIN, B.G.

Agricultural machinery construction in foreign countries. Sel'-
khoz mashina no.10:29-30 0'55. (MLRA 8:12)
(Agricultural machinery)

SHATUNOVSKIY, Grigoriy Mikhaylovich, kand.tekhn.nauk; KORCHAGIN, P.A.,
inzh., retsenzent; VORONIN, B.G. inzh., red.; IVENSKAYA, N.D.,
red.izd-va; CHERNOVA, Z.I., tekhn.red.

[Engineering efficiency of the structures of agricultural
machinery] Tekhnologichnost' konstruktsei sel'skokhoziaistvennykh
mashin. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry.
1960. 367 p. (MIRA 13:6)
(Agricultural machinery)

VORONIN, BORIS GRIGOR'YEVICH obituary - TRAKT. i sel'skhoz'mash
(1902? - 1963) vol. 33 no. 5 p. 3 of cover
May '63.

BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.; EYDENZON, V.Ya.;
ZAGRANICHNYY, Yu.Ye.

Wide-bench mining of coal. Nauch. trudy KNIUI no.14:109-114
'64. (MIRA 18:4)

BEVZIK, Yu.Ya. [deceased]; VORONIN, B.I.; ZAGRANICHNYY, Yu.Ya.; SERBO, O.S.;
USTINOVSKIY, M.N.; EYDENZON, V.Ya.

Working the Feliks seam 'n strips on the dip along its entire
thickness. Nauch. trudy KNIUI no.14:102-109 '64. (MIRA 18:4)

BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.

Comparison of various coal mining methods for working thick seams.
Nauch. trudy KNIUI no.14:78-80 '64.

Advantage of using mining systems with short mechanized faces in
the working of medium thickness and thick seams in the Karaganda
Basi. Ibid.:80-8? (MIRA 18:4)

BEVZIK, Yu.Ya. [deceased]; SERBO, O.S.; VORONIN, B.I.; EYDENZON, V.Ya.

Relation of a miner's labor productivity in each mine on the load
per stope. Nauch. trudy KNIUI no.14:83-90 '64.

Work practices by the section-mine system. Ibid.:114-120 (MIRA 18:4)

BLOKHIN, Nikolay Mikolayevich; VARONIN, D.S., red.

[Science against cancer] Nauka protiv raka. Moskva,
Izd-vo "Znanie," 1964. 31 p. (Novoe v zhizni, nauke,
tekhnike. VIII Seriya: Biologiya i meditsina, no.20)
(MIRA 17:10)

1. Deystvitel'nyy chlen AMN SSSR (for Blokhin).

KARZINKIN, Georgiy Sergeyevich, doktor biol. nauk; VORONIN, B.S.,
red.; NIKOLAYEV, V.R., red.

[Secrets of the underwater kingdom] Tainy podvodnogo
tsarstva. Moskva, Znanie, 1964. 30 p. (Novoe v zhizni
nauke, tekhnike. VIII Seriya: Biologiya i meditsina, no.21)
(MIRA 17:11)

RYSS, Yu.S.; VORONIN, D.V.; GOLDBERG, I.S.

Secor mineral formation under the action of an electric field in
sulfide deposit, Vest. LGU 20 no.18 '65 Seriya geologii i geografii
no.3:34-39 (MIRA 18:10)

VORONIN, E.S.; YAKAYT, Yu.A.

Switching of the phase of a three-position parametric
trigger. Radiotekh. i elektron. 11 no. 2:211-218 F '66
(MIRA 19:2)

1. Submitted October 9, 1964.